

Arkwood Superfund Site Ground Water Discussion
10 December 2015
9:00 to 10:15 a.m. Central

Attendance:

EPA:	Stephen Tzhone Scott Huling
USGS:	Phil Harte
EA Engineering:	Jay Snyder Ted Telisak
McKesson:	James Fler
Ozark Underground	Thomas Aley Shiela Beeman
ADEQ:	Mark Moix Doug Ritchie Megan Ruffin Grant Kneebone Dianna Kilburn

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1. Jim Fler opened with a discussion of difficulties with predicting and catching a high flow event. Phil Harte spoke to catching and monitoring via automatic measurement and logging the rising limb, peak and falling limb of the hydrograph. Tom Aley reported that turbid flow can be expected when flow at New Cricket Spring reaches about 30 to 40 gallons per minute (gpm).
 2. With respect to the second dye at the treatment plant, James Fler discussed problem with dye breakthrough or overflow from high discharge events. Scott Huling has some concerns but wants to see a proposal and plan of action to consider. Tom Aley agreed seeps on north side of road near New Cricket Spring and westward along the road will be sampled with carbon adsorption samplers, and grab samples will be collected during site visits if possible. Tom Aley also noted carbon samplers can be placed in wells.
 3. There was much discussion regarding sampling the high flow event from seeps and the railroad tunnel. James Fler raised concern regarding potential for false positives, particularly along the railroad tracks, from which dioxin may be derived. James Fler also raised concerns about the action level for these samples. He wondered if it would perhaps be 30 parts per quadrillion and expressed concern about data quality and data use concerns. Stephen Tzhone acknowledged legitimacy of these concerns. Stephen Tzhone proposed McKesson look into viability of filtering samples without loss of colloidal fraction and perhaps filtered and unfiltered aliquots could be run. McKesson will study and propose in response to these comments.
 4. Everyone agreed that railroad safety is paramount and risk will be mitigated to the degree possible during sampling within the tunnel.
 5. Regarding monitoring wells, James Fler discussed the problem with drilling into a connected karst fracture, and noted that some boreholes may be dry. Phil Harte summarized potential geophysical methods that might be employed to locate fractures. Tom Aley did not think additional wells were needed and proposed sampling the onsite supply well which could be



pumped over the duration of the dye trace. Tom Aley did not see the benefit of sampling groundwater to the north, below New Cricket Spring. Scott Huling reiterated his long-standing position on the appropriateness of downgradient sentinel wells to demonstrate capture with groundwater treatment systems.

6. In summarizing, Stephen Tzhone invited McKesson to develop a scope of work to facilitate discussion of methods and rationale. James Fleer will develop the basis for injecting a second dye at the New Cricket Spring treatment plant in more detail, the basis for use of carbon samplers, and the methodology for sampling seeps on north side of road. James Fleer will more fully evaluate whether or not seep samples can be filtered and still retain colloidal material in a sample. Stephen Tzhone reiterated the need for safety in the railroad tunnel. James Fleer will consider a geophysical survey to help locate additional wells, and will consider the impacts this upfront work may have on schedule if anticipated wet El Nino winter flows are to be sampled.